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Review Article

Uteseftone syrup's effect on menstrual irregularity and related disorders

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ABSTRACT

The health of women is crucial since they are the only individuals with such incredible creative capacity. Over the period of her life, a woman may experience Artavadushti, which are menstrual disorders of varying ages. Ayurveda assists women in enhancing their health and boosting the quality of lives by adhering to "paricharyas," or behaviours to be followed at specific times in life, such as Rajaswala—menstruation, Garbhini—pregnancy, and Sootika—postpartum. The paricharya that receives the most disregard is Rajaswala. Rajaswala Paricharya aids in easing the majority of menstrual period-related symptoms and assisting women in adapting in a healthy way to the significant physical and psychological changes that occur during the menstrual cycle. Significant herbs found in Uteseftone syrup include Ashoka, Dhataki, Ashwogandha, Satawari, Lodhra, Daruharidra, Utpal, Raktachandhan, Aamra, Nagarmotha, Sunthi, and Jira, which have antibacterial, antioxidant, and anti-inflammatory activities. They also include essential phytochemicals. Its adaptability in treating menstruation-related disorders allowed it to treat conditions like Amenorrhea (absence of period), Dysmenorrhea (painful period), Oligomenorrhea (infrequent period), Polymenorrhea (frequent period), Menorrhagia (heavy period), Hypomenorrhagia (light period), and Metrorrhagia (Spotting between periods).

1. Introduction

The monthly shedding of a woman's uterine lining is known as menstruation (Artava) (more commonly known as the womb). Menstruation is sometimes referred to as menses, menstrual period, cycle, or period. The menstrual blood, which is made up of both blood and tissue from the uterus's interior, moves from the uterus through the cervix and out of the body through the vagina.[1] Pregnancy is made possible by the menstrual cycle, a distinctive physiological occurrence in the female mammalian reproductive system.[2,3] The first menstrual period (menarche) typically starts when a woman is 12 to 15 years old and ends when she is 50 years old, or at menopause.[3] The length of the menstrual cycle is determined by counting the days between the first day of bleeding and the start of the subsequent hemorrhage.

A menstrual cycle typically lasts 28 days, however it may be a bit shorter or longer. Generally speaking, a typical menstrual cycle lasts from 21 to 35 days. Women's menstrual cycles are most consistent when they are between the ages of 21 and 35 when they are fertile.[4,5] The regularity of menstruation cycles is seen as a sign of a woman's reproductive health; alterations in the menstrual cycle can occur for a variety of reasons, but they are frequently linked to disorders of the ovaries-thyroid and pituitary axis.

Polycystic ovary syndrome (PCOS) has been demonstrated to affect 87 percent of women with irregular menstrual cycles; lengthy menstrual periods, or oligomenorrhea (>35 days), are frequently observed in

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PCOS patients and are caused by ovarian malfunction and insulin resistance.[6,7] Several hormones have an impact on the menstrual cycle. Anovulation, a condition marked by decreased ovarian steroid secretion and synthesis, is characterized by irregular menstrual cycles, which is one of its key symptoms.[8–11]

Functional hypothalamic amenorrhea, which is accompanied by reduced gonadotropin-releasing hormone secretion and dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, is the primary cause of irregular menstrual cycles.[12–15] Infertility, heart disease, and type 2 diabetes are just a few of the chronic disorders that may arise as a result of these hormonal issues.[16–18] Additionally, long-term menstrual cycle anomalies can cause menopause to start earlier than expected. Premature menopause raises the risk of osteoporosis and heart disease, according to earlier studies. Numerous factors, including risk factors that can be changed, can have an impact on irregular menstruation and early menopause.[19–21]

2. Types of Menstrual Disorders

2.1. Amenorrhea (Absence of period)

The absence of menstruation during a woman's reproductive years is known as amenorrhea. Amenorrheic physiological conditions are most frequently observed during pregnancy and lactation (breastfeeding). There are two types of amenorrhea: primary and secondary. Amenorrhea can have a variety of causes. The proliferative phase and the secretory phase, which each last 28 to 30 days, are the two phases that make up the typical female menstrual cycle. The uterine lining begins to shed at the end of the cycle, which is a typical aspect of female menstruation. Amenorrhea, which affects women between the ages of 12 and 49 who are reproductive active, is the absence of menstruation. Amenorrhea can be caused by main or secondary factors. Pregnancy is the first thing that needs to be checked out when examining such a patient because it is the most common cause of amenorrhea. In general, a woman has amenorrhea if her period is absent for six months.[22]

2.2. Oligomenorrhea (Infrequent period)

Menstrual blood flow in a woman that is irregular and inconsistent is known as oligomenorrhea. Menarche, postpartum, and the perimenopausal phase all see some fluctuation in menstrual flow. However, oligomenorrhea is the term used when a woman reports having more than 35-day periods or four to nine cycles in a year. Prior to the onset of oligomenorrhea, menstrual flow should be regular. Oligomenorrhea can be brought on by cushing syndrome, prolactinomas, uncontrolled diabetes, an adverse reaction to oral contraceptives, primary ovarian insufficiency, among other things.[23]

2.3. Polymenorrhea (frequent period)

The word "polymenorrhea" is used to characterize menstrual cycles that are less than 21 days long. A typical menstrual cycle lasts 24 to 38 days. One example of abnormal uterine bleeding is polymenorrhea. Shorter cycle duration may be natural for some women, but it may also be the result of certain medical issues for other women. Since ovulation frequently occurs earlier than anticipated or even during a period, it can potentially impair fertility. Additionally, polymenorrheic women may experience inconsistent or irregular menstrual cycles. Stress, STIs, infections, endometriosis, and other conditions are among the possible causes.[24]

2.4. Menorrhagia (Heavy period)

Heavy menstrual bleeding that occurs on a regular basis is known as menorrhagia. Idiopathic ovulatory menorrhagia is characterized by persistent heavy bleeding without obvious pelvic disease or a general bleeding condition. In two-thirds of women with obvious menorrhagia, menorrhagia restricts daily activities and results in anemia (loss of 80 mL blood per cycle). Idiopathic menorrhagia, excessive bleeding brought on by fibroids, adenomyosis, or intrauterine devices are all possible causes of prostaglandin problems (IUDs). Ten percent of women with menorrhagia in general and forty percent of women with severe menorrhagia have fibroids, yet fifty percent of women who have hysterectomy for menorrhagia are found to have a normal uterus.[25]

2.5. Hypomenorrhagia (Light period)

Extremely little menstrual blood flow is referred to as hypomenorrhea, sometimes referred to as brief or scanty periods. Menorrhagia, which is more correctly known as hypermenorrhea, is the opposite of heavy menstrual flow.[26]

2.6. Metrorrhagia (Spotting between periods)

Metrorrhagia is uncharacteristic bleeding between intervals of regular menstruation. Metrorrhagia can be brought on by pregnancy, the use of some contraceptives, including Depo-Provera and intrauterine devices, as well as STIs. Other causes include genital injuries, neoplasms, coagulation abnormalities, and infections like TB. Specifically addressing comorbid symptoms like vaginal discharge and pain in the abdomen.[27]

2.7. Dysmenorrhea (Painful period)

The term "painful monthly bleeding" (dysmenorrhea) comes from Greek.[28] Primary and secondary dysmenorrhea are two categories for this condition. Lower abdomen pain that occurs during the menstrual cycle and is known as primary dysmenorrhea is not linked to any pathology or other disorders.[29] Secondary dysmenorrhea, on the

other hand, is typically linked to other uterine or external pathology.[30] Women in their reproductive years frequently complain of dysmenorrhea. Significant negative effects on a person's emotional, psychological, and functional health are linked to dysmenorrhea.[31]

2.8. Causes of menstrual cycle irregularities

Menstrual cycle irregularities can be caused by a variety of factors, like as

1. **Pregnancy or breast-feeding**: A woman who has missed her period may be pregnant at an early stage. After pregnancy, menstruation typically doesn't start up again until after breastfeeding. This condition is known as lactational amenorrhea.
2. **Eating disorders, extreme weight loss or excessive exercising:** Menstrual irregularities can come from eating disorders that cause anorexia nervosa, drastic weight reduction, and increased physical activity.
3. **Polycystic Ovarian Syndrome (PCOS):** Women with a common endocrine system disease may have experienced irregular periods as well as enlarged ovaries, which may be seen in each ovary during an ultrasound examination. These small fluid-filled collections are called follicles, and they are present in each ovary.
4. **Premature Ovarian Failure:** The lack of normal ovarian function before the age of 40 is typically referred to as premature ovarian failure. Period irregularities may last years for women who have primary ovarian insufficiency, often known as premature ovarian failure.
5. **Pelvic Inflammatory Disease (PID):** Women get irregular menstrual bleeding as a result.
6. U**terine fibroids:** These uterine growths are not malignant, but they can increase menstrual flow and lengthen it.$[1]

2.9. Associated symptoms

Lower abdominal discomfort, body aches, headaches, and backaches calf muscle discomfort breast discomfort, anxiety, fever, nausea, burning in the palms and feet Vomiting, erratic movement Fear, weakness, Each menstrual cycle was accompanied by an appetite loss.[32]

2.10. Menstrual cycle problems

The menstrual cycle in females is referred to as hormone-controlled. The hypothalamus, pituitary gland, and ovaries all play a significant role in when it begin. Luteinizing hormone (LH) and follicle stimulating hormone are released by the pituitary gland (FSH). Luteinizing Hormone Releasing Hormones (LHRH) from the hypothalamus then stimulate this pituitary gland. LH and FSH, two hormones, both regulate the activation of follicles in the female ovary. The ovaries produce the hormones progesterone and oestrogen. The menstrual cycle is regulated by the hormones' overall balance. Three phases make up the menstrual cycle. They are follicular/proliferative, ovulatory, and luteal/secretory phases. Birth control pills or hormone tablets used for hormonal therapy are prescribed to manage irregular menstrual cycles. Women who suffer from irregular menstrual periods brought on by fibroids, polyps, cysts, PCOS, or endometriosis receive the appropriate care. A woman may experience issues known as menopausal syndrome if she approaches menopause (the cessation of menstruation). It becomes unexpected during the periodic cycle. Hot flushes, exhaustion, unexpected sweating, headaches, mood swings, libido loss, weight gain, foggy thinking, sleep issues, and muscular discomfort are among the issues the lady experiences. Low dose hormonal birth control pills are used to treat menopausal symptoms. This controls menstruation and prevents abrupt changes in hormone levels. The management of such instances is additionally assisted by hormone replacement therapy (HRT). Topical hormones and vaginal lubricants are advised in cases of vaginal dryness. Mood problems are treated with antidepressants.[1]

2.11. Function

To regulate the menstrual cycle, hormones are produced in a negative and positive feedback fashion. Once puberty begins, gonadotropin-releasing hormone (GnRH) is secreted in the hypothalamus in an enhanced, pulsatile manner. The 7-transmembrane G-protein receptor in the anterior pituitary is then activated by GnRH after being delivered there. This serves as a cue for the anterior pituitary to release luteinizing hormone and stimulating follicular hormone (FSH) (LH). The ovaries get input from FSH and LH. Theca cells and granulosa cells, two cell types found within the ovarian follicle, are in charge of producing hormones. By turning on the enzyme cholesterol desmolase, LH drives theca cells to make progesterone and androstenedione. Androstenedione diffuses to the surrounding granulosa cells once it is secreted. Here, FSH drives the granulosa cells to convert androstenedione to testosterone and then 17-beta-estradiol by activating the aromatase enzyme. The anterior pituitary receives negative feedback when levels of 17-beta-estradiol or progesterone rise according to the stages of the menstrual cycle, which causes the anterior pituitary to produce less FSH and LH and, as a result, less 17-beta-estradiol and progesterone. Ovulation is an exception to this rule. In this instance, after a crucial level of 17-beta-estradiol is reached, it gives the anterior pituitary positive feedback, causing it to create more FSH and LH. In the feedback mechanism, the granulosa cells also generate inhibin and activin, which, respectively, inhibit and increase the release of FSH from

the anterior pituitary. The GnRH receptors on the anterior pituitary can be upregulated to increase hormone production or down regulated to reduce hormone production to control this feedback process.[33]

3. Mechanism

3.1. Phase 1: The Follicular, or Proliferative Phase

The follicular or proliferative phase is the first stage of the menstrual cycle. Based on an average menstrual cycle length of 28 days, it happens from the first to the fourteenth day of the cycle. The length of the follicular phase varies, which leads to differences in the length of the menstrual cycle. Estrogen, specifically 17-beta-estradiol, is the predominant hormone throughout this stage. The FSH receptors within the follicle at the start of the cycle are upregulated, which results in an increase of this hormone. However, when the follicular phase nears its conclusion, the higher levels of 17-beta-estradiol will give the anterior pituitary negative feedbacks. The endometrial layer of the uterus is meant to expand during this stage. In order to accomplish this, 17-beta-estradiol stimulates the uterine endometrial layer's growth, increases the quantity of stroma and glands present, and deepens the spiral arteries that supply the endometrium. This phase is also crucial for establishing a welcoming and advantageous environment for potential arriving sperm. This is accomplished by 17-beta-estradiol by forming cervix channels that let sperm access. The copious, fluid, and elastic modifications of the cervical mucus are where the channels are formed. A primordial follicle starts to develop into a Graafian follicle during this stage. The Graafian follicle develops into the mature follicle when the neighboring follicles start to disintegrate. This prepares the follicle for ovulation, the following process.[33]

4. Ovulation

Ovulation usually takes place 14 days before to menses, so with a typical 28-day cycle, ovulation takes place on day 14. Due to the maturity of the follicles and increased production of the hormone, 17-beta-estradiol levels are high at the end of the proliferative period. 17-beta-estradiol stimulates the synthesis of FSH and LH exclusively during this time. When plasma 17-beta-estradiol concentrations of at least 200 pico grams per milliliter are obtained, this happens. The LH surge refers to the elevated amounts of FSH and LH that exist at this time. As a result, the mature follicle ruptures, releasing an oocyte. The cervical alterations that were already occurring during the follicular phase intensify, allowing for more abundant, waterier cervical mucus to better accept the potential sperm—the levels of 17-beta-estradiol drop toward the conclusion of ovulation.[33]

4.1. Phase 2: The luteal or secretory phase

The luteal or secretory phase of the menstrual cycle comes next. From cycle day 14 to day 28, this phase always takes place. The main hormone during this stage is progesterone induced by LH, which prepares the corpus luteum and endometrium for potential fertilized ovum implantation. Progesterone will give the anterior pituitary negative feedback as the luteal phase comes to a conclusion, causing the levels of FSH, LH, and ultimately 17-beta-estradiol and progesterone to fall. A structure called the corpus luteum is created in the ovary at the location of the mature follicle rupture to produce progesterone and 17-beta-estradiol, which predominates near the conclusion of the phase due to the negative feedback loop. In order to get ready, the endometrium expands its vascular network and increases mucus secretion. Progesterone stimulates the endometrium to slow down endometrial proliferation, reduce lining thickness, build more complicated glands, store energy sources in the form of glycogen, and increase surface area within spiral arteries in order to achieve this. Progesterone lowers and thickens the cervical mucous, making it non-elastic since the fertilization period has past and sperm entrance is no longer a priority, in contrast to the cervical mucous modifications seen during the proliferative phase and ovulation. Progesterone also raises hypothalamus temperature, which causes a rise in body temperature during the luteal phase. The corpus luteum produces plasma levels of 17-beta-estradiol and progesterone at the conclusion of the secretory phase. A fertilized ovum is implanted within the endometrium in the event of pregnancy, and the corpus luteum survives and maintains the hormone levels. However, the corpus luteum regresses and the levels of 17-beta-estradiol and progesterone in the serum drop quickly if no fertilized ovum is implanted.[33]

5. Normal Menstruation

The endometrial layer, which has changed over the menstrual cycle, cannot be maintained when the hormone levels drop. Menses are the days 0 through 5 of the upcoming menstrual cycle. Menstrual cycles can last for days or weeks. Only 25% of the blood throughout a period is venous, meaning that most of the blood is arterial. Prostaglandins, tissue fragments, and a sizable amount of endometrial tissue-derived fibrinolysis are also present. Menstrual blood normally doesn't include clots unless the flow is particularly heavy since the fibrinolysis lyses the clot.

The average menstrual flow lasts between three and five days, but a healthy female may experience periods that last up to eight days. Blood loss can be as little as a few drops to as much as 80 mL, with an average loss of 30 mL. Blood loss of more than 80 mL is regarded as abnormal. The volume of blood flow can be affected by a number of variables, such

as drugs, the thickness of the endometrium, blood diseases, and blood coagulation disorders, among others.[33]

6. Pathophysiology

6.1. Anovulatory cycles

Ovulation might occasionally fail to take place during the menstrual cycle. Anovulatory cycles, as they are often known, are frequent in the first 12 to 18 months following menarche (the occurrence of the first menstrual period) and again just before menopause begins. When ovulation is absent, the corpus luteum is typically nonexistent, and progesterone's impact on the endometrium is absent. . But as long as estrogen is present, the proliferative endometrium grows until it is thick enough to slough off and break down. Although the length of time it takes for the bleeding to start varies, it often happens less than 28 days after the last menstrual cycle. Additionally, the flow varies from being meager to being rather profuse.[33]

6.2. Clinical significance

As a result of the numerous difficulties, negative effects, and emotional discomfort that the menstrual cycle may cause for a female patient—450 menses on average in a woman's lifetime—it is crucial to comprehend the physiology of the menstrual cycle. To determine the cause, a female who presents with primary or secondary amenorrhea must undergo clinical tests. However, unless a practitioner has a full understanding of the hormone feedback system, meaningful testing from the level of the ovaries to the hypothalamus cannot be carried out. Additionally, she could be experiencing premenstrual syndrome, dysmenorrhea, or menorrhagia, which are issues with her actual menses. A doctor would not be able to gather a thorough history and physical to enable comprehension of the underlying reason without knowledge of the female anatomy and physiology of the menstrual cycle. Every patient's menstrual cycle needs to be assessed as a potential area of concern for her infertility because infertility is a significant problem in our culture and the menstrual cycle is the foundation for how a woman's body prepares for conception. To effectively treat our female patients, doctors must have a thorough understanding of the menstrual cycle.[33]

Deal with the Ayurvedic idea that identifying our "dosha" is vital to maintaining our health. Our dosha might be compared to a kind of "health star sign." Knowing our dosha will enable us to better comprehend how our bodies operate and, consequently, how we can support them.[34]

Vata, Pitta, and Kapha are the three basic Ayurvedic "doshas." All three are present in varying degrees in everyone, although one tends to predominate over the others. Vata types are very imaginative and full of ideas, pitta types are fiery, passionate, and determined, and kapha types are steady, grounded people. The vata, pitta, and kapha stages of the menstrual cycle have their very own names in Ayurveda. Knowing which phase impacts us the most would be helpful.[34]

6.3. Ayurvedic menstrual cycle works:[34]

• Day 1 – 5 (from the first day of bleeding) - the vata phase • Day 4 – 14 (from the end of bleeding until ovulation) - the kapha phase • Day 14 – 18 (from ovulation until your period starts) – the pitta phase.[34]

6.3.1. Vata – (day 1 – 5)

Vata controls all bodily downward motions, forcing the menstrual flow downward and out of the body. If your vata is out of balance, it will show itself as PMS, headaches, gastrointestinal distress, constipation, discomfort during sexual activity, weariness, anxiety, and insomnia, which means you need to engage in some vata balancing activities.[34]

6.3.2. How can you balance vata during your period?

It's time to take some guilt-free "me time" and make room for calm and tranquility to recharge. Try to stay away from stimulants that cause anxiety, such alcohol or caffeine. It is beneficial at this time to take calming, nourishing herbs that will support and develop your adrenal glands, such as licorice and ashwagandha.[34]

6.3.3. Kapha - (day 4 – 14)

Kapha person are inclined to strengthen and assist others. Therefore, the kapha stage of the cycle is mainly on developing the endometrium (the mucous membrane that lines the inside of the uterus). The hormone that grows and increases throughout this time is oestrogen, which helps the body recover its strength and becomes ready for conception. If your kapha is out of balance, you may experience symptoms including fluid retention, breast tenderness, weight gain, fatigue, back pain, and general heaviness. Not only are kapha types adept at retaining energy, but also memory and emotion. It may also be a sign of an unbalanced kapha if ladies discover they feel teary and depressed at this time.[34]

6.3.4. How can you balance kapha at this stage of your cycle?

Aloe vera and turmeric are both decongestant herbs that can be taken at this time to assist clear any stagnation. The herb shatavari improves oestrogen balance throughout your menstrual cycle by being nutritious and energizing. Warming herbal beverages with ingredients like ginger, turmeric, and cinnamon can help balance the cold and heavy effects of kapha. Choose a workout that will encourage perspiration and circulatory activity. To get the circulation moving and remove stagnation, a challenging yoga session

or a quick lunchtime walk would be ideal.[34]

6.3.5. Pitta (day 14 – 18)

The primary dosha involved in ovulation and the luteal phase is pitta. The body begins to prepare itself for new life during this stage thanks to the transformative nature of fire. Pitta essentially primes our bodies for conception by causing a rise in the progesterone level. Libido is high when ovulation first begins, but when the luteal phase (the period that follows ovulation) takes hold, any extra pitta can be seen as hot pitta building up in the blood and liver. Due to the connection between menstruation and blood channels, the body becomes overheated, which can cause rashes on the skin, headaches, diarrhea, irritability, and emotional exhaustion. Pitta types can actually manifest as fire at this time. Other typical PMS symptoms include breast discomfort, cravings, bloating, and diarrhoea.

6.4. How can you balance pitta as you prepare for your period?

This is a crucial time to support your liver in metabolizing high hormone levels. By eating more cruciferous and colorful veggies and getting more exercise each day, you can make a difference. Aloe vera, turmeric, and spirulina are some heat-clearing and liver-regulating herbs and spices that can be beneficial at this point in your menstrual cycle. Favor cooling herbal teas like nettle and mint to maintain your equilibrium. Pay attention to your emotional demands. You might want to push yourself a little harder at this time, but doing relaxing yoga will help you to control your irrational emotions.

Susrula have classified eight disorders of ‘artava’ on basis of predominance of doshar[35]

1. Vataja artavadusti
2. Pittaja artavadusti
3. Kaphaja artavadusti
4. Kunapagandhi artavadusti/ Raktaja
5. Granthibhuta / Kapha-vata artavadusti
6. Putipuja / pitta-kapha artavadusti
7. Ksina / pitta-vata artavadusti
8. Mutrapuridsgsndhi / Tridoshaja artavadusti

There is mention of anartava or nastartava by susruta & vagbhata

6.5. Anartava

The vitiated vata & kapha doshas obstruct the artava vaha Srotas thus destroying the artava.

It appears to be amenorrhea due to endometrial abnormalities where ovarian hormones are normal.[35]

6.6. Artavativrddhi

There is excessive amount of artava due to pitta misbalance causing foul smell along body ache due to vata.

It refers to increase in amount of menstrual blood thus may be co-related to menometrorrhagia due to hyper estrogen.[35]

6.7. Asrgdara / Pradara

It can be considered as menorrhagia or polymenorrhagia. Caraka & Cakrapani says vitiated rakta increase and gets mixed with raja thus increasing raja. Dalhana explains the clinical features where there is excessive or prolonged bleeding as well as inter menstrual bleeding.[35]

6.8. Artavaksaya

Susruta described there is ksaya of all the doshas, dhatus, malas and upadhatus which cause deficiency. There is similar term; ksinartava can be compared to oligomenorrhoea.[35]

6.9. Kastartava

It can be considered dysmenorrhea that is present in vataja artavadusti, Asrgdara, ksina artavadusti. It is due to obstruction of passage of vayu by artava.[35]

6.9.1. Ashok bokra Br:(Saraca asoca)

The female reproductive system is used to profit from Ashoka, the "queen of herbs." "The remover of sorrows" is the literal meaning of the name "Ashoka." It is a crucial Ayurvedic herb that is mostly utilized in bleeding gynecological disorders. From Saraca indica comes the traditional medication Asokarishta, which is used to cure menorrhagia. All gynecological problems, including premenstrual syndrome (PMS), postmenopausal syndromes, leucorrhea, amenorrhea, oligomenorrhea, and dysmenorrhea, can be effectively treated with Asokarishtam (Ashokarishta), an Ayurvedic drug (uterine tonic). It helps with menstrual issues and the symptoms that go along with them, such as painful and heavy bleeding, mood swings, and sadness. Extracts of the stem bark of Saraca indica have been recorded, and it has been determined that secondary metabolites such flavonoids, terpenoids, lignin, phenolic compounds, tannins, and others are what give these extracts their medicinal effects. Women who experience heavy, irregular, or painful periods can benefit from treatment for a variety of gynecological and menstrual issues. It can be taken orally twice daily after meals in the form of Churna/powder or capsules. Women can relieve their stomach pain and spasms in this method.[1]

Ashoka is one of main herbs that are used in almost every gynecological disorder. It has kasaya Tikta Rasa and is kapha pitta samaka. As it is vedanasthapaka &

Raktastambhaka dravya have best effect in Asrgdara, Kashtartava. It acts as uterine tonic.[36]

6.9.2. Dhataki Fr. (Woodfordia fruticosa)

It is a component that makes infertile women fertile. In case of an emergency, cuts are stopped bleeding using fresh flowers. The use of flower-based medicines for the treatment of female-specific illnesses such leucorrhea and dysmenorrhoea is particularly common. An herbal mixture including W. fruticosa has been patented for the management of gynecological illnesses; it makes the claim that excessive bleeding brought on by monthly disorders causes anemia and that it can be prevented and treated. The polar components of Woodfordia flowers include hydrolysable tannins such ellagic acid, phenolic chemicals like gallic acid and bergenin, as well as glycosides like chrysophanol-8-O-D-glucopyranoside, quercetin glycosides [3-rhamnoside], 3-O-(6"-galloyl)—d glucopyranoside, naringenin 7- In addition to hecogenin, the plant's blooms also contain other non-phenolic substances.[37]

Dhataki is one of important fermentation herb in Ayurveda. It is used in artava dusthi as it is stambha, uttejaka and vranaropaka.

6.9.3. Ashwogandha Rt. (Withania somnifera)

Ashwagandha, often known as Indian ginseng, is a plant in the Solanaceae family that has been shown to help women who are having trouble getting pregnant. This untamed plant thrives in hot, dry climates, such those found in the Canary Islands, northern Africa, and northern India (Iran, Jordan, Sudan, Palestine, Afghanistan, and Egypt). Premature ejaculation, polyarthritis, throbbing pains, lumbago, oligospermia, vitiligo, general debility, ulcers, impotence, uterine infections, leucorrhoea, and orchitis have all been treated with the herb in traditional medicine.

There are numerous chemical compounds found in ashwagandha extract, including anaferin, anahygrine, hygrine, cuscohygrine, tropine, pseudotropine, withananine, pseudowithanine, somnin, and somniferine-3-tropyltigloate. Polyphenols (isoflavones and flavonoids), which can have estrogenic effects, make up the majority of the plant's constituents. As a result of its GABA mimicking abilities, ashwagandha extract boosted oogenesis by increasing gonadotropin hormone secretion. This effect was attributed to ashwagandha extract's enhancement of the HPG axis and balancing of serum estrogen.[38]

Ashwogandha is a potent vajikarana dravya. It has rejuvenating effect and support male reproductive system as well as female reproductive system. It is garbhasaya sothara and yoni shoolahara.

6.9.4. Satawari Rt. (Asparagus racemosus)

The one herb that is most frequently utilized in conventional medicine is satawari. The ancient Ayurvedic literature made reference to the use of asparagus racemosus. Gynecological issues like irregular menstruation cycles and sexual dysfunction are treated with it. Due to the presence of phytoestrogenic components, asparagus is used therapeutically. A group of steroidal saponins, sarsasapogenins, flavonoids, kaempferol, quercetin, rutin, and polyphenols are the main bioactive components that give the herb its medical significance. Due to its chemical composition, Asparagus racemosus is beneficial for treating menstrual diseases such dysmenorrhea, premenstrual syndrome, irregular bleeding during the perimenopausal era, as well as conditions that arise after menopause. It has been demonstrated that asparagus racemosus is effective in treating dysmenorrhea, which is characterized by painful menstruation without significant pelvic pathology, because it contains saponins that prevent the oxytocic activity on uterine musculature and maintain spontaneous uterine motility. Because asparagus racemosus is a known source of phytoestrogen, it can be useful for easing uncomfortable menopausal symptoms (The chemical entities from plants which mimic hormone are called phytoestrogens). These function in a weaker manner than natural estrogen.[39]

Shatavari is most popular rasayana drug to treat reproductive elements of women. It promotes production of reproductive hormones, sthapaka. As it is medhya it overcomes stress mediated hormonal disorders.

6.9.5. Lodhra Br. (Symplocos racemosus)

Small evergreen tree Symplocos racemosa Roxb., which is a member of the unigeneric Symplocaceae family and is referred to as lodhra in Sanskrit, is native to tropical and subtropical regions of the world. A flowering plant genus in the Ericales family with over 318 species, only 25 of which are dioecious, and just a few of which are economically significant is called Symplocos. In many Ayurvedic and herbal formulations, the Symplocaceae racemosa plant is a key component for treating leucorrhea, uterine issues, and liver diseases. The plant's stem bark has been the subject of the majority of phytopharmacological studies, which have shown that it has anti-cancer, hepatoprotective, antioxidant, anti-androgenic impact, anti-inflammatory, wound-healing activity, and anti-diabetic benefits. Numerous phenolic glycosides, such as symplocoside, triterpenoids, such as betulinic acid, acetyloleanolic acid, and oleanolic acid, as well as flavonoids, such as quercetin, were found in phytochemical studies, and these may have contributed to the observed protective benefits.[40]

Lodhra is another herb that is commonly unused in gynecological disorder at any stage of women life. It has kasaya Rasa, sheeta virya and is kaphapitta samaka. It is raktastambhaka, sonitasthapaka. It maintains the level of

hormone & enhances ovulation.

6.9.6. Daruharidra/Chutro Rt. (Berberis aristata)

The Berberidaceae family includes the significant medicinal herb Berberis aristata, which is described in Ayurveda. It can be found throughout the northern Himalayan region. For heavy menstrual bleeding (Asrigdara), various medication and therapy regimens are described in Ayurveda; uttar basti is one of these and is said to be the most effective for gynecological issues. The plant has beneficial properties that include antipyretic, antibacterial, antimicrobial, hepatotoxic, anti-hyperglycemic, anti-cancer, anti-oxidant, and anti-lipidemic. Additionally helpful in the treatment of HIV/AIDS, osteoporosis, diabetes, gynecological disorders, hemorrhoids, eye and ear infections, wound healing, jaundice, skin conditions, and malarial fever are B. aristata extracts and their formulations. Numerous significant phytochemicals, including alkaloids of the proto-berberine, isoquinoline, and bisbenzyl-isoquinoline types as well as other bioactive components such flavonoids and phenolic acids, are present in the plant.[32,41]

Daruharidra is shothahaea, pradaranasaka.

6.9.7. Utpal/Nil Kamal Fr. (Nymphaea nouchali)

The family of flowering plants known as Nymphaeceae includes Nymphaea nouchali (Burm. f). It is often referred to as "Shapla" in Bengali and is the national flower of Bangladesh. Large perennial aquatic herb N. nouchali has short, rounded rhizomes. An important and well-known medicinal plant, (Nymphaeaceae) is used extensively in the Ayurvedic and Siddha systems of medicine for the treatment of diabetes, inflammation, liver disorders, urinary disorders, menorrhagia, blenorrhagia, menstruation problems, as an aphrodisiac, and as a bitter tonic. Phytochemical studies revealed that the entire plant contains a high level of phenols, flavones, glycosides, alkaloids, steroids, saponins.[42]

Kumuda has kasaya Rasa & sheeta virya. It stops pathological bleeding. It is virsya and prevents abortion and nourishes the fetus during pregnancy. It has action of dahaprashmana & mutra virechana.

6.9.8. Raktachandhan Wd. (Pterocarpus santalinus)

The Fabaceae family includes the small- to medium-sized deciduous tree P. santalinus. P. santalinus has a wide range of biological activity and possible health advantages, including antioxidative, antidiabetic, antibacterial, anticancer, and anti-inflammatory characteristics, as well as protective effects on the nervous system, liver, and gastric mucosa. Bioactive substances found in P. santalinus were believed to be the cause of all these beneficial properties. The main bioactive substances found in P. santalinus' heartwood include pterolinus K and L, calocedrin, santalin A and B, savinin, and pterostilbenes. The bioactive substances have the potential to have significant positive effects on health because, among other things, they can operate as antioxidants, inducers and inhibitors of enzymes, inhibitors of receptor activity, and inducers and inhibitors of gene expression. The plant's phytochemical examination revealed that it included sugars, flavonoids, terpenoids, phenolic compounds, alkaloids, saponins, tannins, and glycosides. The literature that is currently available also shows that heartwood powder contains a number of specific substances, including pterocarpol, santalin A, B, and Y, pterocarptriol, isopterocarpalone, pterocarpodiolones with -eudesmol, and cryptomeridiol, as well as a number of nonspecific substances, including isoflavones, isoflavonoid glucosides, triterpenes; sesquiterpenes, and related phenolic compounds such as β-sitosterol; lupeol; epicatechin; lignans; and pterostilbenes.[43]

Raktachandana have dahasamaka, stambhaka, sothahara, Raktapitta samaka action.

6.9.9. Aamra/Aap ko biya Pulp (Mangifera indica)

One of the fruits that is most commonly grown in tropical and subtropical areas is the mango (Mangifera indica L.). It is a member of the Anacardiaceae family and is regarded as the King of all fruits. Mangoes are a vital and well-liked fruit that include a wealth of nutrients, including carbs, fiber, minerals, and antioxidants like vitamin C, carotenoids, and phenolic compounds, all of which have been linked to a variety of health benefits. An essential molecule for pharmacology and medicine is mangiferin, a glucosyl xanthone with potent antioxidant, anti-lipid peroxidation, immunomodulatory, cardiotonic, hypotensive, wound healing, anti-degenerative, and antidiabetic properties. It maintains a healthy level of reproductive hormones, boosts sexual arousal, and gives the body the essential minerals and phytochemicals required for reproduction.[44]

Amra every part have their beneficial action. Bark has kashaya Rasa & sheeta virya. Flower, bark, seed kernel is stambhaka and balance kaphapitta doshas. Ripe fruit is virsya and vata samaka and unripe fruit aggravate tridoshasa.

6.9.10. Nagarmotha Fr. (Cyperus rotundus)

Xiang Fu is the dried rhizome of Cyperus rotundus L., which belongs to the genus Cyperus and family Cyperaceae. It has a strong aroma and is bland, somewhat sweet, and slightly bitter. It accesses the liver, spleen, and triple warmer meridians and has benefits on qi stasis, qi circulation, menstruation, and pain relief. Hernia discomfort, irregular menstruation, spleen and stomach qi stagnation, and other conditions are also treated with it. The herb mostly contains flavonoids including kaempferol, luteolin, and quercetin as well as sesquiterpenoids like patchoulenone, isopatchoulenone, sugeonyl acetate, sugetriol triacetate, and

sugebiol. Cyperus rotundus L.'s pharmacological properties have been thoroughly investigated. It can enhance ovarian performance.[45]

Mustakar has tikta, katu, kasaya Rasa & sheeta virya. It is one of the best Deepana-pachana dravya. It is beneficial in rajorodha, stanya vikara and sutika roga.

6.9.11. Sunthi Rz. (Zingiber officinale)

The herbal zingiber A well-known spice called R. rhizome (ginger) has long been used to treat inflammatory conditions. Beta-carotene, capsaicin, caffeic acid, and curcumin are some of the components it has. Other ingredients include gingerol, gingerdiol, and gingerdione. An increase in uterine prostaglandin synthesis resulting from COX-2 activity has been proposed as one cause for primary dysmenorrhea. According to studies, non-specific non-steroidal anti-inflammatory medications (NSAIDS) may inhibit COX-2, which is a mechanism through which prostaglandin synthesis is inhibited (NSAIDs). The anti-inflammatory, antipyretic, and analgesic properties of these medications are beneficial.[46]

Sunthi is best herb for aama pachana due to its Tikshna property. It removes obstruction in artavavaha srotas. It is vata samaka and has action of shola prashamana.

6.9.12. Jira Fr. (Cuminum cyminum)

Cuminum cyminum L., known as Jeeraka in Sanskrit and Jeera in Hindi, is one of the herbs that has been used for many years to treat a variety of illnesses. Traditional uses of the herb include treatment of gynecological disorders, indigestion, diarrhea, and other gastrointestinal disorders. Additionally, this plant is examined for a number of pharmacological properties like antibacterial, anticancer, and ulcerative properties. Additionally, neither alpha-pinene nor beta-pinene were discovered in the roots, while alpha-phellandrene was notably the only terpenoid component found in the leaves and alpha-pinene13 was most abundant in the flowers. The major constituents of cumin fruits include cellulose, fixed oil content (approximately 10%), minerals, protein, sugar, and volatile oils (1.5%), along with significant amounts of phenolic component. These chemical compounds are all used to treat gynecological illnesses.[47]

Jeeraka have kati Rasa, is laghu and rukshya with ushna virya. It is kaphavata samaka and pitta vardhaka. It is sothahara, stanya, vatanulomaka vishodhana action which leads to healthy female reproductive system.

7. Conclusion

The Dekha herbals Uteseftone syrup consists of many poly herbals crude drug, including Ashok bokra, Dhataki/Dhai phul, Ashwogandha, Satawari, Lodhra, Daruharidra/Chutro, Utpal/Nil Kamal, Raktachandhan, Aamra/Aap ko biya, Nagarmotha, Sunthi, and Jira, have a direct or indirect impact on menstruation disorders. According to Ayurvedic literature, they are one of the widely utilized herbs that have been used for many years to treat a variety of diseases. Based on the characteristics of the herbs, it manifests its action by resolving a variety of gynecological disorders, including premenstrual syndrome (PMS), post-menopausal syndromes, leucorrhea, amenorrhea, oligomenorrhea, and dysmenorrhea, as well as metrorrhagia, hypomenorrhagia, and polymenorrhea. These herbs include highly important qualities like antioxidative, antibacterial, and anti-inflammatory capabilities. These poly herbals crude drugs that was made in syrup form have many phytochemicals constituent such as anaferin, anahygrine, hygrine, cuscohygrine tropine, pseudotropine, withananine, pseudowithanine, somnin, and somniferine-3-tropyltigloate, Secondary metabolites like flavonoids, terpenoid, lignin, phenolic compounds, tannins, phenolic compounds like gallic acid, bergenin; hydrolysable tannins like ellagic acid and glycosides like chrysophanol-8-O-D-glucopyranoside, quercetin glycosides [3-rhamnoside], 3-O-(6"-galloyl)-β-d glucopyranoside, naringenin 7-glucoside and kaempferol 3-O-glucoside, saponins, sarsasapogenins, flavonoids, kaempferol, quercetin, rutin and polyphenols, triterpenoids like betulinic acid, acetyloleanolic acid and oleanolic acid and flavonoids like quercetin, proto-berberine, isoquinoline, bisbenzyl-isoquinoline and other bioactive constituents like flavonoids and phenolic acids, phenols, flavones, glycosides, alkaloids, steroids, saponins, santalin A and B, savinin, calocedrin, pterolinus K and L, and pterostilbenes. Phytochemical analysis of the plant showed the presence of carbohydrates, flavonoids, terpenoids, phenolic compounds, alkaloids, saponins, tannins, and glycosides, pterocarpol; santalin A, B, and Y; pterocarptriol; isopterocarpalone; pterocarpodiolones with β-eudesmol; cryptomeridiol, several nonspecific compounds such as isoflavones; isoflavonoid glucosides; triterpenes; sesquiterpenes, and related phenolic compounds such as β-sitosterol; lupeol; epicatechin; lignans; and pterostilbenes kaempferol, luteolin and quercetin, gingerol, gingerdiol, and gingerdione, beta-carotene, capsaicin, caffeic acid and curcumin etc which shows therapeutic activities in menstruation disorder.

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10. Conflict of Interest

None.

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